D.P.U. 93-1C

Application of Boston Edison Company:

(1) under the provisions of G.L. c. 164, § 94G, as amended by St. 1981, c. 375, and the Company's tariff, M.D.P.U. 592-A, for approval by the Department of Public Utilities of a change in the quarterly fuel charge to be billed to the Company's customers pursuant to meter readings in the billing months of August, September, and October; and

(2) for approval by the Department of rates to be paid to Qualifying Facilities for purchases of power pursuant to 220 C.M.R. §§ 8.00 et seq. and M.D.P.U. 545-A. The rules established in 220 C.M.R. §§ 8.00 et seq. set forth the filings to be made by utilities with the Department, and implement the intent of sections 201 and 210 of the Public Utility Regulatory Policies Act of 1978.

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APPEARANCES: John M. Fulton, Esq.
Boston Edison Company
800 Boylston Street
Boston, Massachusetts 02199
FOR: BOSTON EDISON COMPANY
Applicant

## I. INTRODUCTION

On July 2, 1993, pursuant to G.L. c. 164, § 94G and 220 C.M.R. §§ 8.00 et seq., Boston Edison Company ("BECo" or the "Company") notified the Department of Public Utilities ("Department") of the Company's intent to file a change to its fuel charge in conformance with its tariff, M.D.P.U. 592-A, and to its Qualifying Facility ("QF") power purchase rates in conformance with its tariff, M.D.P.U. 545-A. The Company requested that both these changes be effective for bills issued pursuant to meter readings in the billing months of August, September, and October 1993. These matters were docketed as D.P.U. 93-1C.

Pursuant to notice duly issued, a public hearing on the Company's application was held on July 28, 1993, at the Department's offices in Boston. At the hearing, the Company provided return of service certifying that public notice of the hearing was made in accordance with Department regulations.

At the hearing, the Company presented two witnesses: Rose Ann Pelletier, fuel rate and unit performance administrator in the fossil fuel planning, procurement, regulation, and performance group; and Anne M. Lynch, fuel rate analyst in the fossil fuel planning, procurement, regulation, and performance group. The Company offered

documentation of its fuel charge and performance adjustment calculations in Exhibits BE-1 through BE-9.

BECo is a public utility engaged principally in the generation, purchase, transmission, distribution, and sale of electricity. The Company supplies retail electric service to an area of approximately 590 square miles encompassing the City of Boston and 39 surrounding cities and towns. BECo serves about 560,000 residential customers, 90,000 commercial customers and 1,700 industrial customers. BECo also supplies wholesale electricity to other utilities and municipal electric departments.

The Company's last rate increase occurred in October of 1992 as a result of the Department's approval of a settlement agreement ("1992 Settlement") in Boston Edison Company, D.P.U. 92-92 (1992). The Company's previous rate increase before D.P.U. 92-92 occurred in October 1989 as a result of the Department's approval of a settlement agreement ("1989 Settlement") in Boston Edison Company, D.P.U. 88-28/88-48/89-100 (1989).

## II. FUEL CHARGE

On July 21, 1993, the Company, pursuant to G.L. c. 164, § 94G(b), filed with the Department its proposed changes to its fuel charge and QF power purchase rates for the billing months of August, September,

and October 1993. The Company's fuel charge is composed of a fuel cost component and a New Performance Adjustment Charge ("NPAC") levied in accordance with the 1989 Settlement and a Fossil Generation Performance Adjustment Charge ("FGAC") levied in accordance with the 1992 Settlement.

A. FUEL COST COMPONENT

In it July 21, 1993 filing, the Company proposed a fuel cost component of $0.02662 per kilowatthour ("KWH"), an increase of $0.00024 per KWH over the fuel cost component presently in effect (Exh. BE-2, at 1). The Company also proposed a total fuel charge of $0.03091 per KWH, an increase of $0.00042 over the total fuel charge presently in effect (id.).

In their prefiled testimony, Ms. Pelletier and Ms. Lynch testified that the increase in the proposed fuel adjustment charge is due, in part, to a reduced cumulative overrecovery and a reduced replacement power expense refund. The witnesses stated that the Company forecasts a $1 million cumulative overrecovery balance entering the forecast quarter, compared to a forecast $8 million overrecovery entering the prior quarter (Exh. BE-1, at 4). The witnesses explained that a $7 million reduction in the cumulative overrecovery position entering the quarter

results in an increased fuel charge (id.).

On April 15, 1993, the Department issued its decision in Boston Edison Company, D.P.U. 92-1A-A (1993) ("D.P.U. 92-1A-A"), the Department's performance review of the Company's generating facilities for the performance year October 1990 to November 1991. In D.P.U. 92-1A-A, the Department ordered a number of disallowances for replacement power costs attributed to extensions of planned outages at Pilgrim Nuclear Power Station ("Pilgrim") and New Boston Units 1 and 2. D.P.U. 92-1A-A at 48. The Department ordered the Company to refund to its customers expenditures for replacement power made during the performance year. Id. During the billing quarter May through July, the Company returned a preliminary amount of $3 million associated with the replacement power expense disallowed in D.P.U. 92-1A-A to its customers through its fuel charge (Exh. BE-1,

at 4-5). The Company is currently proposing to return to its customers approximately $1 million through its fuel charge (id.). The Company notes that a $2 million reduction in replacement power expenses returned to retail customers results in an increased fuel charge (id.). The effects of the reduced cumulative overrecovery and the reduced replacement power expense refund are partially offset by the Company's

anticipation of lower system energy expenses and higher billed sales relative to generation requirements in the forecast quarter compared to the last quarter (id.).

B. NEW PERFORMANCE ADJUSTMENT CHARGE

In accordance with the terms of the 1989 Settlement, a Performance Adjustment Charge ("PAC") went into effect for the three-year period beginning November 1, 1989. See BECo Tariff M.D.P.U. 783. The 1989 Settlement further provided that beginning November 1, 1992, a NPAC would take the place of the PAC (1989 Settlement at 8). See BECo's Tariff M.D.P.U. 784. The NPAC will remain in effect until October 31, 2000 (1989 Settlement at 11). In D.P.U. 93-1B, the Department approved a NPAC of $0.00411 for the billing months of May, June, and July 1993. Boston Edison Company, D.P.U. 93-1B at 11. The Company proposed an NPAC for August, September, and October 1993, of $0.00429 per KWH, a increase of $0.00018 per KWH from the NPAC currently in effect (Exh. BE-1, at 10-11).

As defined in the 1989 Settlement, the NPAC is calculated as:

NPAC = [(POUT x PRAT) + SALP + PIA]/KWH, where

POUT = one-third of the Company's retail share of the KWHs of net power generated at Pilgrim during the performance year[1] during which the NPAC will be in effect;

PRAT = the Pilgrim Cent-Per-KWH Rate established under the 1989 Settlement;

SALP = a Systematic Assessment of Licensee Performance Adjustment;

PIA = a Performance Indicator Adjustment; and

KWH = the estimated number of KWHs to be sold by BECo under rates subject to the Department's jurisdiction during the applicable performance year (1989 Settlement at 9-11).

The product of the POUT multiplied by the PRAT, referred to by the Company as the Capacity Factor Adjustment ("CFA"), for the twelve-month period from November 1, 1992 to October 31, 1993 is $42,105,231 (Exh. BE-4, at 2-3). The CFA is based on a forecasted 66 percent Pilgrim annual capacity factor ("CF") for the 1992-1993 performance year (id.).

The SALP Adjustment is based on Pilgrim's average SALP score issued by the U.S. Nuclear Regulatory Commission ("NRC") (1989

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[1] The term "performance year" shall refer to any of the eleven consecutive twelve-month periods beginning November 1, 1989 (1989 Settlement at 9-11).

Settlement at 9). The NRC issued its most recent SALP evaluations on December 26, 1991 and on May 21, 1993. The average SALP score for Pilgrim in the December 26, 1991 report was 1.57 while the average SALP score

in the May 21, 1993 report was 1.43. The weighted SALP score is 1.51 (Exh. BE-4, at 3)[2]. The 1989 Settlement provides that for each one tenth of a point that the SALP score is less than 1.6, $500,000 will be added to the NPAC costs to be recovered over the remainder of the performance year (1989 Settlement at 9-11); thus, an increase of $50,000 will be made for each hundredth of a point by which the SALP score is less than 1.6. Since the Company's weighted score is 1.51, nine hundredths of a point less than 1.6, the Company has included a positive adjustment of $450,000 ($50,000 x 9) in the calculation of the NPAC (Exh. BE-4, at 4).

The PIA contains five individual measures reflecting performance at Pilgrim: (a) Automatic Scrams While Critical; (b) Safety System Failures; (c) Safety System Actuations; (d) Collective Radiation Exposure; and (e) Maintenance Backlog Greater Than Three Months Old (1989 Settlement at 9-11). The PIA is based on Pilgrim's performance relative to the industry.

The Company received a letter dated March 26, 1993, from the

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[2] The Company calculated the weighted score by determining the number of days during the performance year that each SALP score was effective ({201 days * 1.57} + {164 days * 1.43}/365 = 1.51) (Exh. BE-4, at 3; Tr. at 7). The Department notes that the Company's calculation is in accordance with the terms of Section XI.C.5. of the 1989 Settlement (1989 Settlement at 9).

NRC, indicating that: (1) the 1992 industry average for Automatic Scrams While Critical was 1.43; (2) the 1992 industry average for Safety System Actuations was 0.82; and (3) the 1992 industry average for safety system failures was 3.44 (Exh. BE-4, at 4-6). During the period November 1, 1992 through June 30, 1993, the Company experienced four events that it believes the NRC will deem Automatic Scrams While Critical, three events that it believes the NRC will deem Safety System Actuations and five events it believes the NRC will deem Safety System Failures (id.). Under the 1989 Settlement, for each performance year in which the number of Automatic Scrams While Critical, Safety System Actuations and Safety System Failures is more than one occurrence in excess of the industry mean rounded to the nearest integer, a negative adjustment of $150,000 for each such occurrence above the neutral zone will be added to the NPAC (1989 Settlement at 9-10). For the forecast quarter, the Company has proposed four negative adjustments of $150,000, two for the Automatic Scrams While Critical, one for the Safety System Actuations, and one for the Safety System Failures components of the PIA (Exh. BE-4, at 4-6).

The Institute of Nuclear Power Operations ("INPO") issued a report entitled "Performance Indicators for the U.S. Nuclear Utility Industry, 1992 Year" indicating that the median value of the most recent three

year (1990-1992) collective radiation exposure performance of all boiling water reactors ("BWRs") was 380 man-rems per unit per year (id. at 6-7). As of June 30, 1993, the exposure to Pilgrim employees was approximately 473 man-rems (id. at 7). The Company is projecting an additional 40 man-rems of exposure over the next four months to bring the total collective annual radiation exposure to 513 man-rems (id.). Under the 1989 Settlement, for each performance year in which the number of man-rems of exposure is more than 25 percent greater than the median value of the most

recent three year performance for all other BWRs, a negative amount equal to $2,000 for each man-rem of exposure by which this indicator is more than 25 percent higher than the median shall be added to the NPAC (1989 Settlement at 10). For the forecast quarter, the Company has proposed a negative adjustment of $76,000 for the Collective Radiation Exposure component of the PIA (Exh BE-4, at 7).

INPO no longer provides the data used to calculate the Maintenance Backlog Greater Than Three Months Old. Therefore, the Department approved the use of the median value of 54.4 percent, as contained in the final 1990 INPO report, as the industry average for this indicator. Boston Edison Company, D.P.U. 93-1A at 13-14. As of June 30, 1993, the Maintenance Backlog Greater Than 3 Months Old was 41.1 percent. The Company is projecting this indicator to be no higher than 44.4 percent as of October 31, 1993. Under the 1989 Settlement, for each performance year in which the percentage of the corrective Maintenance Backlog More Than Three Months Old is more than five percentage points below the median percentage of that indicator for all other nuclear power plants, a positive amount equal to $15,000 for each percentage point by which this indicator is more than five percentage points below the industry median will be added to the NPAC (1989 Settlement at 10). For the forecast quarter, the Company

has proposed a positive adjustment of $75,000 for the Maintenance Backlog Greater Than 3 Months Old component of the PIA (Exh. BE-4, at 8).

According to the terms of the 1989 Settlement, the PAC and the NPAC may be calculated using estimates of these performance factors (1989 Settlement at 7, 11). The 1989 Settlement also provides that the Company shall reconcile any estimates used in calculating a quarterly PAC or NPAC when final information concerning the performance factor values becomes available (id.). The NPAC may change on a quarterly basis because the Company's forecast of retail KWH sales has changed or because the Company has under- or overrecovered revenues from the previous quarter. The Company's proposed NPAC calculation for the 1992-1993 performance year includes $10,995,763 as the final reconciliation of PAC revenues for the three performance years from November 1, 1989, to October 31, 1992, as shown on Table 2 attached to this Order (Exh. BE-4, at 1).

C. FOSSIL GENERATION PERFORMANCE ADJUSTMENT CHARGE

The FGAC is comprised of two parts: (1) an Equivalent Availability Factor ("EAF") Incentive; and (2) a Heat Rate Incentive (1992 Settlement at 4-6).

The EAF Incentive is based on the weighted average annual EAF for the Company's fossil units -- Mystic Units 4, 5, 6, and 7, New Boston Units 1 and 2, and the Company's combustion-turbine units -- where weighing is a function of unit capacity (id. at 4). The EAF neutral zone

is set at 76 percent to 84 percent. For each percentage point that the EAF falls below 76 percent for any performance year, the EAF Incentive will be a negative adjustment of $500,000. For each percentage point that the EAF is above 84 percent for any

performance year, the EAF Incentive will be a positive adjustment of $500,000. The EAF may not exceed $3 million, positive or negative, for any performance year (id. at 4-5).

The Heat Rate Incentive applies to the annual average heat rate at the Company's Mystic Unit 7 (id. at 5-6). The specific heat rate goal varies based on the capacity factor achieved at Mystic Unit 7. For any performance year, the Heat Rate Incentive will be a positive adjustment of $7,500 for each British Thermal Unit ("BTU") per KWH that Mystic Unit 7's annual average heat rate drops below the neutral zone. The Heat Rate Incentive will be a negative adjustment of $7,500 for each BTU per KWH that the heat rate exceeds the neutral zone for any performance year (id.).

For the forecast period, the Company anticipates that its performance in each of these areas will fall within the neutral zone. Accordingly, the Company has proposed no adjustment through the FGAC (Exh. BE-5, at 1-3).

## III. QUALIFYING FACILITIES

Pursuant to the Department's rules in 220 C.M.R. §§ 8.00 et seq., rates to be paid to QFs for energy are set with the same frequency as the fuel charge. A QF is a small power producer or cogenerator that meets the criteria established by the Federal Energy Regulatory Commission in 18 C.F.R. § 292.203(a) and adopted by the Department in 220 C.M.R. § 8.02.

Pursuant to the governing regulations, the Company is required to calculate short-run energy purchase rates on a time-of-supply basis for two rating periods: peak and off-peak.

In addition, the Company is required to calculate a non-time-differentiated rate, i.e., a total period rate, which is a weighted average of the time-of-supply rates, where the weighing is a function of the number of hours in each rating period. See 220 C.M.R. § 8.04(4)(b).

In Exhibit BE-6, the Company has proposed the following standard rates to be paid to QFs during August, September, and October 1993:

Energy Rates By Voltage Level (Dollars/KWH)

| Voltage Level | Peak | Off-Peak | Total |
|---|---|---|---|
| 115 KV | 0.02298 | 0.02549 | 0.02477 |
| 14 KV | 0.02343 | 0.02591 | 0.02521 |
| 4 KV | 0.02359 | 0.02607 | |

0.02538
Secondary 0.02412 0.02658
0.02590

Short-Run Capacity Rates

| Voltage Level | Short-Run Capacity Rate |
|---|---|
| 115 KV | 0.02923 dollars/KWH |
| 14 KV | 0.03007 dollars/KWH |
| 4 KV | 0.03059 dollars/KWH |
| Secondary | 0.03159 dollars/KWH |

The Department notes that the Company's proposed peak energy rates are lower than the off-peak rates at every voltage level. The Company stated that the energy rates were calculated in a manner consistent with the method approved in Boston Edison Company, D.P.U. 88-1B-3 (1988) (Exh. BE-1, at 13-14; Tr. at 21-22).[3] According to BECo, this method accounts for the effect of pumped storage hydroelectric production on system generation and enrgy costs (Tr. at 20-21). The Company could not explain why the peak rates were lower than the off-peak rates, but suggested that the anomaly could be the

[3] Under this method, the peak rate is derived from the total period and the off-peak period rates, so that the weighted average of the peak and off-peak rates equals the total period rate. The weighting factors in the weighted average are the number of hours in each rating period. See Boston Edison Company, D.P.U. 88-1B-3, at 4 (1988).

result of the change in its peak period hours (Tr. at 23-24).[4]

The Department is concerned that in this case, the Company has not provided a better explanation of why its peak rates are lower than the off-peak rates. Therefore, we direct the Company, in its next fuel charge filing, to re-examine its current method for calculating its short-run avoided energy rates and propose appropriate modifications.

## IV. FINDINGS

Based on the record in this case, the Department finds:

1. that the fuel charge to be applied to Company bills issued pursuant to meter readings for the billing months of August, September, and October 1993 shall be $0.03091 per KWH. The fuel charge shall be comprised of a fuel cost component calculated as shown in Table 1 attached to this Order, and a New Performance Adjustment Charge calculated as shown in Table 2 attached to this Order;

2. that the QF power purchase rates for August, September, and October 1993 shall be the rates set forth in Section III of this Order;

## V. ORDER

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[4] In the Company's last rate case proceeding, the Department approved BECo's proposal to change the summer peak hours of 8:00 a.m.- 9:00 p.m. to 9:00 a.m. - 6:00 p.m. See Boston Edison Company, D.P.U. 92-92, Exh. BE-RDS-7 (1992).

Accordingly, after due notice, public hearing, and consideration, it is

ORDERED: That Boston Edison Company is authorized to put into effect a quarterly fuel charge of $0.03091 per kilowatthour as set forth in Section IV, Finding 1, of this Order for bills issued pursuant to meter readings in the billing months August, September, and October 1993, subject to refund; and it is

FURTHER ORDERED: That the fuel charge approved herein shall apply to kilowatthours sold to the Company's customers subject to the jurisdiction of the Department and shall be itemized separately on all such customers' electric bills; and it is

FURTHER ORDERED: That the Company's Qualifying Facility power purchase rates for the billing months of August, September, and October 1993 shall be those stated in Section III and found to be proper in Section IV of this Order; and it is

FURTHER ORDERED: That the Company, in its next fuel charge proceeding, shall re-examine its current method for calculating its short-run energy purchase rates and propose appropriate modifications; and it is

FURTHER ORDERED: That the Company, in all future fuel charge proceedings, shall notify all intervenors and their respective counsel from the Company's prior two fuel charge proceedings that it is proposing an adjustment to its fuel charge, and shall also notify these persons of the date scheduled for the hearing on the proposed fuel charge at least ten days in advance of the hearing; and it is

FURTHER ORDERED: That the Company, in all future fuel charge proceedings, shall provide all intervenors and their respective counsel from the prior two fuel charge proceedings with a copy of its fuel charge filing, in hand or by facsimile, on the same day it is filed with the Department; and it is

FURTHER ORDERED: That, pursuant to G.L. c. 164, § 94G(a) and (b), the fuel costs allowed by this Order are subject to such disallowance as the Department may determine in any subsequent investigation of the Company's performance period that includes the quarter applicable to the present charge; and it is

FURTHER ORDERED: That the fuel charge shall appear as a separate item on all customers' electric bills and shall be referenced with a footnote that will identify each customer's fuel-cost component and will explain that the fuel charge also includes the New Performance Adjustment Charge.

By Order of the Department,